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APPLICATION NO.	FII	LING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,772 11/10		1/10/2003	0/2003 Yedidia Atzmony	E30-066	4366
34021	7590	07/17/2006		EXAMINER	
GEORGE A.		STER		LOVEL, KIN	IBERLY M
SUITE 303	IKEEI			ART UNIT	PAPER NUMBER
MANCHESTI	ER, MA	01944		2167	·

DATE MAILED: 07/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary - The MAILING DATE of this communication appear Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS WHICHEVER IS LONGER, FROM THE MAILING DATI - Extensions of time may be available under the provisions of 37 CFR 1.136(a after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period will a - Failure to reply within the set or extended period for reply will, by statute, cau Any reply received by the Office later than three months after the mailing dat earned patent term adjustment. See 37 CFR 1.704(b). Status 1) Responsive to communication(s) filed on 10 Nove	S SET TO EXPIRE 3 MC E OF THIS COMMUNIC (a). In no event, however, may a respect year of the application to become ABA te of this communication, even if the ember 2003. Setion is non-final. The except for formal matter parte Quayle, 1935 C.D.	ONTH(S) OR THIRTY (30) DAYS ATION. ply be timely filed THS from the mailling date of this communication ANDONED (35 U.S.C. § 133). mely filed, may reduce any ers, prosecution as to the merits	S,
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	from consideration		
Disposition of Claims	from consideration		
4) ☐ Claim(s) 1-16 is/are pending in the application. 4a) Of the above claim(s) is/are withdrawn 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) 1-16 is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/or elapplication Papers			
9) The specification is objected to by the Examiner.			
 10) The drawing(s) filed on 10 November 2003 is/are: Applicant may not request that any objection to the dra Replacement drawing sheet(s) including the correction 11) The oath or declaration is objected to by the Exam 	wing(s) be held in abeyand is required if the drawing(s	ce. See 37 CFR 1.85(a). s) is objected to. See 37 CFR 1.121	
Priority under 35 U.S.C. § 119			
12) Acknowledgment is made of a claim for foreign pri a) All b) Some * c) None of: 1. Certified copies of the priority documents h 2. Certified copies of the priority documents h 3. Copies of the certified copies of the priority application from the International Bureau (F	ave been received. ave been received in Ap documents have been i PCT Rule 17.2(a)).	oplication No received in this National Stage	
Attachment(s) 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 11/10/2003.	Paper No(s)	ummary (PTO-413))/Mail Date formal Patent Application (PTO-152)	

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DETAILED ACTION

1. Claims 1-16 are rejected.

Claim Objections

2. Claims 1 and 2 are objected to because of the following informalities:

Claim 1 recites the limitation "the destination storage locations" in line 14 and the limitation "the information" in line 20. There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "the destination storage locations" in line 14 and the limitation "the step" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140

F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-4 and 9-12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of US application No. 10/601,359, claims 1-28 of US application number 10/073,708 and claims 1-28 of US Patent No. 6,363,385. Claims of US application No. 10/601,359, US application number 10/073,708 and US Patent No. 6,363,385 contain every element of the instant application and as such anticipates claims 1-4 and 9-12 of the instant application.

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This is a provisional obviousness-type double patenting rejection (10/601,359 and 10/073,708 only) because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 6. Claims 1-2, 5-6, 9-10 and 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No 6,363,385 to Kedem et al (hereafter Kedem et al).

Referring to claim 1, Kedem et al disclose in a data processing system for connection in an open system network including a host device for generating commands during the processing of a host application including a command to copy data with arguments identifying a source logical device and a destination logical device (see abstract), said method comprising the steps in sequence of:

- A) establishing an operating environment by identifying, in response to arguments, the source and destination logical devices (see column 4, lines 12-20 the copy command is considered to represent the *arguments*),
- B) making the source and destination logical devices available for use by host applications (see column 4, lines 21-34), and
- C) copying the data from the source logical device to the destination storage locations in an ordered manner (see column 4, lines 35-38) including, each storage location in the

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source logical device:

i) copying the data from each storage location in the identified source logical device to the identified destination logical device (see column 6, lines 13-19 – the tracks are considered to represent the *storage locations*), and

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ii) updating the information in the operating environment to indicate the completion of each transfer from a storage location in the source logical device (see column 6, lines 26-27 – modification is considered to represent *updating*).

Referring to claim 2, Kedem et al disclose a method as recited in claim 1 additionally comprising the step of deleting the operating environment after said copying has been completed for all the data in the source logical device (see column 5; lines 62-65 and column 6, lines 26-27 – after the copying is completed, the environment is terminated).

Referring to claim 5, Kedem et al disclose in a data processing system for connection in an open system network including a host device for generating commands during the processing of a host application including a command to copy the data from a source logical device comprising a plurality of contiguous data tracks on a physical disk storage device to a block of contiguous data tracks in a destination logical device, said method comprising the steps in sequence of:

A) establishing an operating environment by identifying, in response to arguments in the command that identify the source and destination logical devices (see column 4, lines 12-20 – the copy command is considered to represent the *arguments*),

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B) making the data in the source and destination logical devices available for use by host applications (see column 4, lines 21-34), and

- C) copying the data from the source logical device to the destination logical device on an ordered, track-by-track basis including, and for each data track in the source logical device (see column 4, lines 35-38 and column 6, lines 13-19):
- i) copying the data a data track in the source logical device to a corresponding data track in the destination logical device (see column 6, lines 13-19), and
- ii) updating the information in the operating environment to indicate the completion of each transfer from the source logical device (see column 6, lines 26-27 modification is considered to represent *updating*).

Referring to claim 6, Kedem et al disclose a method as recited in claim 5 additionally comprising the step of deleting the operating environment after said copying has been completed for all the data tracks in the source logical device (see column 5, lines 62-65 and column 6, lines 26-27 – after the copying is completed, the environment is terminated).

Referring to claim 9, Kedem et al disclose a data storage facility that connects to a host device that generates commands during the processing of host applications wherein said data storage facility is adapted for copying data from a source logical device to a destination logical device in response to a predetermined command from a host application identifying said source and destination logical devices (see abstract), said facility comprising:

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A) means responsive to the predetermined command for establishing an operating environment by identifying said source and destination logical devices (see column 4, lines 12-20 – the copy command is considered to represent the *command*),

- B) means for enabling interaction of other commands with said source and destination logical devices (see column 4, lines 21-34), and
- C) means for copying the data from said source logical device to said destination logical device in an ordered manner (see column 4, lines 35-38), and
- D) means responsive to said copying means for updating the operating environment to indicate data that has been transferred by said copying means (see column 6, lines 26-27 modification is considered to represent *updating*).

Referring to claim 10, Kedem et al disclose a data storage facility as recited in claim 9 additionally comprising means for deleting the operating environment after said copying means has been completed copying all the data in said source logical device (see column 5, lines 62-65 and column 6, lines 26-27 – after the copying is completed, the environment is terminated).

Referring to claim 13, Kedem et al disclose a data storage facility for connection in an open system network including a host device that generates commands during the processing of host applications, which commands include a command for copying data with arguments identifying source and destination logical devices wherein each said logical device stores data in contiguous data tracks (see abstract), said facility comprising:

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A) means responsive to the copying command for establishing an operating environment in response to the command and the arguments that identify said source and destination logical devices (see column 4, lines 12-20),

- B) means for enabling interaction of other commands with said source and destination logical devices (see column 4, lines 21-34), and
- C) means for copying the data from said source logical device to said destination logical device in an ordered, track-by-track, manner (see column 4, lines 35-38 and column 6, lines 13-19), and
- D) means responsive to said copying means for updating the operating environment to indicate the complete of each transfer of data in a data track (see column 6, lines 26-27 modification is considered to represent *updating*).

Referring to claim 14, Kedem et al disclose A data storage facility as recited in claim 13 additionally comprising means for deleting the operating environment after said copying means has been completed copying all the data in said source logical device (see column 5, lines 62-65 and column 6, lines 26-27 – after the copying is completed, the environment is términated).

Claim Rejections - 35 USC § 103

- 7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

- 8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
- 9. Claims 3-4, 7-8, 11-12 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No 6,363,385 to Kedem et al as applied to claim 1 above, and further in view of US Patent No 6,757,797 to Kaiya et al (hereafter Kaiya et al).

Referring to claim 3, Kedem et al disclose a host application. However, Kedem et al fails to explicitly teach the further limitations wherein the host application generates as one command a write wherein during said copying request to transfer data from the host application an identified storage location in the source logical device, said method including the steps of: i) interrupting said ordered copying in response to the request, ii) copying data existing in the identified storage location in the source logical device to a corresponding storage location in the destination logical device, iii) re-enabling said ordered copying upon completion of said data copying, and iv) completing the data transfer to the identified storage location in the source logical device in response to the write request. Kaiya et al disclose a copying method between logical disks, including a host application generates as one command a write wherein during said copying

request to transfer data from the host application an identified storage location in the source logical device (see column 7, lines 26-32), said method including the steps of:

- i) interrupting said ordered copying in response to the request (see column 7, lines 33-37),
- ii) copying data existing in the identified storage location in the source logical device to a corresponding storage location in the destination logical device (see column 7, lines 26-32),
- iii) re-enabling said ordered copying upon completion of said data copying (see column 8, lines 11-28), and
- iv) completing the data transfer to the identified storage location in the source logical device in response to the write request (see column 8, lines 25-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the method of Kaiya et al for interrupting the copying of data with the method of Kedem for transferring data. One would have been motivated to do so in order to decrease work stop time when copying data (Kaiya et al: see column 1, lines 35-41).

Referring to claim 4, Kedem et al disclose a host application. However, Kedem et al fails to explicitly teach the further limitations wherein during said copying a host application generates as one command one of read and write requests to transfer data between the host application and an identified storage location in the destination logical device, said method including the steps of: i) interrupting said ordered copying in response to the request, ii) copying data to the identified storage location in the

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destination logical device from a corresponding storage location in the source logical device, iii) re-enabling said ordered copying upon completion of said data copying, and iv) completing the transfer between the host application and the identified storage location in the destination logical device. Kaiya et al disclose a copying method between logical disks, including wherein during said copying a host application generates as one command one of read and write requests to transfer data between the host application and an identified storage location in the destination logical device (see abstract, column 7, lines 26-32; and column 7, lines 56-59), said method including the steps of:

- i) interrupting said ordered copying in response to the request (see column 7, lines 33-37),
- ii) copying data to the identified storage location in the destination logical device from a corresponding storage location in the source logical device (see column 7, lines 26-32),
- iii) re-enabling said ordered copying upon completion of said data copying (see column 8, lines 11-28), and
- iv) completing the transfer between the host application and the identified storage location in the destination logical device (see column 8, lines 25-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the method of Kaiya et al for interrupting the copying of data with the method of Kedem for transferring data. One would have been motivated

to do so in order to decrease work stop time when copying data (Kaiya et al: see column 1, lines 35-41).

Referring to claim 7, Kedem et al disclose a host application. However, Kedem et al fail to explicitly teach the further limitations wherein during said ordered copying a host application generates as another command a write request to transfer data to at least a portion of an identified data storage track in the source logical device, said method including the steps of: i) interrupting said ordered copying in response to the write request, ii) copying data existing in the identified data track in the source logical device to a corresponding track in the destination logical device, iii) re-enabling said ordered copying upon completion of said data copying, and iv) completing the transfer of data associated with the write request to the identified data track in the source logical device. Kaiya et al disclose a copying method between logical disks (see abstract), including wherein during said ordered copying a host application generates as another command a write request to transfer data to at least a portion of an identified data storage track in the source logical device (see abstract and column 7, lines 26-32), said method including the steps of: i) interrupting said ordered copying in response to the write request (see column 7, lines 33-37), ii) copying data existing in the identified data track in the source logical device to a corresponding track in the destination logical device (see column 7, lines 26-32), iii) re-enabling said ordered copying upon completion of said data copying (see column 8, lines 11-28), and iv) completing the transfer of data associated with the write request to the identified data track in the source logical device (see column 8, lines 25-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the method of Kaiya et al for interrupting the copying of data with the method of Kedem for transferring data. One would have been motivated to do so in order to decrease work stop time when copying data (Kaiya et al: see column 1, lines 35-41).

Referring to claim 8, Kedem et al disclose a host application. However, Kedem et al fail to explicitly teach the further limitations wherein during said ordered copying a host application generates as one command one of read and write requests to transfer data between the host application and at least a portion of an identified track in the destination logical device, said method including the steps of: i) interrupting said ordered copying in response to the request, ii) copying data to the identified data track in the destination storage location from a corresponding data track in the source logical device, iii) re-enabling said ordered copying upon completion of said data copying, and iv) completing the transfer between the host application and the identified data track in the destination logical device. Kaiya et al disclose a copying method between logical disks (see abstract), including wherein during said ordered copying a host application generates as one command one of read and write requests to transfer data between the host application and at least a portion of an identified track in the destination logical device (see abstract, column 7, lines 26-32; and column 7, lines 56-59), said method including the steps of: i) interrupting said ordered copying in response to the request (see column 7, lines 33-37), ii) copying data to the identified data track in the destination storage location from a corresponding data track in the source logical device (see

column 7, lines 26-32), iii) re-enabling said ordered copying upon completion of said data copying (see column 8, lines 11-28), and iv) completing the transfer between the host application and the identified data track in the destination logical device (see column 8, lines 25-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the method of Kaiya et al for interrupting the copying of data with the method of Kedem for transferring data. One would have been motivated to do so in order to decrease work stop time when copying data (Kaiya et al: see column 1, lines 35-41).

Referring to claim 11, Kedem et al disclose a host application. However, Kedem et al fail to explicitly teach the further limitations wherein during the ordered copying a host application generates as another command a write request to transfer data from the host application to identified storage location in said source logical device, said copying means including: i) a copy program, ii) means for operating said copy program in the ordered copying mode, iii) means for interrupting said ordered copying operating means in response to any read and write request to a storage location in said destination logical device to enable said copy program to copy data from a corresponding storage location in said source logical device to the identified storage location in the destination logical device, iv) means for re-enabling said ordered copying upon completion of said data copying, and v) means for completing the data transfer to said identified storage location in said source logical device in response to the write request. Kaiya et al disclose a copying method between logical disks (see abstract).

including wherein during the ordered copying a host application generates as another command a write request to transfer data from the host application to identified storage location in said source logical device (see abstract), said copying means including: i) a copy program (see abstract), ii) means for operating said copy program in the ordered copying mode (see column 4, lines 35-38), iii) means for interrupting said ordered copying operating means in response to any read and write request to a storage location in said destination logical device to enable said copy program to copy data from a corresponding storage location in said source logical device to the identified storage location in the destination logical device (see column 7, lines 33-37 and lines 56-59), iv) means for re-enabling said ordered copying upon completion of said data copying (see column 8, lines 1-28), and v) means for completing the data transfer to said identified storage location in said source logical device in response to the write request (see column 8, lines 25-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the method of Kaiya et al for interrupting the copying of data with the method of Kedem for transferring data. One would have been motivated to do so in order to decrease work stop time when copying data (Kaiya et al: see column 1, lines 35-41).

Referring to claim 12, Kedem et al disclose a host application. However,
Kedem et al fail to explicitly teach the further limitations wherein during said ordered
copying a host application generates as one command one of read and write requests
to transfer data between the host application and an identified location said destination

logical device, said ordered copying means including: i) a copy program, ii) means for operating said copy program in the ordered copying mode, iii) means for interrupting said ordered copying operating means in response to any read and write request to a storage location in said destination logical device to enable said copy program to copy data from a corresponding storage location in said source logical device to the identified storage location in the destination logical device, iv) means for re-enabling said ordered copying operating means upon completion of said data copying, and v) means for completing the transfer between host application and said identified storage location in said destination logical device. Kaiya et al disclose a copying method between logical disks (see abstract), including wherein during the ordered copying a host application generates as one command of read and write requests to transfer data between the host application an identified location in said destination (see abstract), said ordered copying means including: i) a copy program (see abstract), ii) means for operating said copy program in the ordered copying mode (see column 4, lines 35-38), iii) means for interrupting said ordered copying operating means in response to any read and write request to a storage location in said destination logical device to enable said copy program to copy data from a corresponding storage location in said source logical device to the identified storage location in the destination logical device (see column 7, lines 33-37 and lines 56-59), iv) means for re-enabling said ordered copying operating means upon completion of said data copying (see column 8, lines 1--28), and v) means for completing the transfer between the host application and said identified storage location in said destination logical device (see column 8, lines 25-28).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the method of Kaiya et al for interrupting the copying of data with the method of Kedem for transferring data. One would have been motivated to do so in order to decrease work stop time when copying data (Kaiya et al: see column 1, lines 35-41).

Referring to claim 15, Kedem et al disclose a host application. However, Kedem et al fail to explicitly teach the further limitations wherein during said ordered copying a host application generates as one command a write request to transfer data from the host application to an identified data track in said source logical device, said copying means including: i) a copy program, ii) means for operating said copy program in the ordered, track-by-track manner, iii) means for interrupting said ordered copying operating means in response to the write request and enabling said copy program to copy data in said identified data track in said source logical device to a corresponding data track in said destination logical device, iv) means for re-enabling said ordered copying upon completion of said data copying, and v) means for completing the transfer of data associated with the write request to said identified data track in said source logical device. Kaiya et al disclose a copying method between logical disks (see abstract), including wherein during said ordered copying a host application generates as one command a write request to transfer data from the host application to identified data track in said source logical device (see abstract), said copying means including: i) a copy program (see abstract), ii) means for operating said copy program in the ordered track-by-track manner (see column 4, lines 35-38), iii) means for interrupting said

ordered copying operating means in response to the write request and enabling said copy program to copy data in said identified data track in said source logical device to a corresponding data track in said destination logical device (see column 7, lines 33-37 and lines 56-59), iv) means for re-enabling said ordered copying upon completion of said data copying (see column 8, lines 1-28), and v) means for completing the transfer of data associated with the write request to said identified data track in said source logical device (see column 8, lines 25-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the method of Kaiya et al for interrupting the copying of data with the method of Kedem for transferring data. One would have been motivated to do so in order to decrease work stop time when copying data (Kaiya et al: see column 1, lines 35-41).

Referring to claim 16, Kedem et al disclose a host application. However, Kedem et al fail to explicitly teach the further limitations wherein during said ordered copying a host application generates as another command one of read and write requests to transfer data between the host application and an identified data track in said destination logical device, said ordered copying means including: i) a copy program, ii) means for operating said copy program in the ordered, track-by-track, manner, iii) means for interrupting said ordered copying in response to one of the read and write requests to a data track in said destination logical device thereby to enable said copy program to copy the data in said corresponding data track of said source logical device to said identified data track in said destination logical device, iv) means

for re-enabling said ordered copying upon completion of said data copying, and v) means for completing the transfer between the host application and said identified data track in said destination logical device, and vi) means for completing the transfer between the host application and the identified destination storage location. Kaiya et al. disclose a copying method between logical disks (see abstract), including wherein during the ordered copying a host application generates as another command one of read and write requests to transfer data between the host application an identified data track in said destination (see abstract), said ordered copying means including: i) a copy program (see abstract), ii) means for operating said copy program in the ordered trackby-track, manner (see column 4, lines 35-38), iii) means for interrupting said ordered copying in response to one of the read and write requests to a data track in said destination logical device thereby to enable said copy program to copy data in said corresponding data track of said source logical device to said identified data track in said destination logical device (see column 7, lines 33-37 and lines 56-59), iv) means for re-enabling said ordered copying operating means upon completion of said data copying (see column 8, lines 1--28), v) means for completing the transfer between the host application and said identified data track in said destination logical device (see column 8, lines 25-28), and vi) means for completing the transfer between the host application and the identified destination storage location (see column 8, lines 25-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the method of Kaiya et al for interrupting the copying of data with the method of Kedem for transferring data. One would have been motivated

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to do so in order to decrease work stop time when copying data (Kaiya et al: see

column 1, lines 35-41).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly Lovel whose telephone number is (571) 272-2750. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Kimberly Lovel Examiner Art Unit 2167

kml 7 July 2006

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